THE NATURE AND MECHANISM OF CREDIT.

THE function of money is to express generic value. A commodity becomes money only in so far as it loses its specific utilities and embodies utility in general. It is not because the gold in the half-eagle may be put to various artistic uses that this coin is money; but it is money because it incarnates in a concrete form a certain amount of that homogeneous, generic force called "value," which, residing in many specific forms, makes up our aggregate wealth. The idea of a fund of "pure capital," of a fund of "general wealth," of "value in the generic," is well known to the readers of Professor J. B. Clark's writings. It is illustrated by the "hereditas" of Roman law or the "estate" of a deceased person in English law. A deceased person has left a variety of things, concrete, dissimilar, incapable of comparison or addition by physical measurements. These specific things, however, in the eye of the law constitute a whole, a homogeneous total of value, capable of exact division into parts precisely equal both as to quantity and quality. Under the auctioneer's hammer, houses, lands, ships, railway shares, household furniture, business partnerships, jewelry, horses, pictures, lease of a church pew, and the good will of a business are beaten into a unity, strictly alike in every part,— a sum total of value. Those who share in the inheritance (in the absence of specific bequests) receive, not specific things, but a certain portion of the value of the inheritance; and this portion of value is expressed in money, which they "invest" as they choose.

John Locke apparently thought of all commodities as lying in one scale of a balance held in equilibrium by the total of money lying in the other scale. A somewhat

similar conception is the basis of the "quantity" theory of the value of money. The conception is true when by "money" is meant the sum total of values expressed in terms of the money unit. The conception, however, is an absurdity when by money is meant only standard money, specie, or even specie plus its formal representatives. The amount of "horse-power" used in the world has no traceable connection with the number of horses used; and yet "horse-power" represents mechanical force in the generic, and all the mechanical force used may be expressed in terms of "horse-power."

The point to be kept clear is this: while the monetary unit must be a concrete economic good, it is not a specific good. Not the specific availability of the gold in the sovereign for making watch-cases and gilding, but its generic availability for all uses, is what constitutes it the monetary unit. As a specific commodity, it is not money. As money, it is the generic commodity, or, in Professor William Smart's phrase, "the universal commodity."

Money performs this function of representing generic value chiefly in two ways: first, by enabling men to get a conventional unit for measuring the value of specific goods; and, second, by furnishing them with a general title of economic ownership over all specific values. In the first place, then, money is a measure of value. This has been denied by some writers. Their error is due to one of two misconceptions. They either regard value as a mere numerical ratio between different economic goods or they think the measurement of value impossible, because the value of the unit itself varies. If value *is* merely a numerical ratio, of course it cannot be *measured*. But even Ricardo, who is regarded as the author of this conception of value as a ratio, often says "relative value" when he means a ratio, and "value" when he means a quality or force in a commodity. Value conceived as a *power*, as a force residing in goods, is ca-

pable of measurement. Weight is a force in an object due to the action upon it of the earth's mass. Change the mass of the earth, the weight of the object changes. Remove the object five thousand feet further away from the centre of the earth, its weight changes again. Value is a force residing in objects called goods. The value of a good is due to the action upon it of human wants. Change man's desires for this good, its value changes. Remove the good one thousand miles further away from the men who want it or remove it one hundred years into the future, its value again changes.

It is true that the aggregate of men's desires for any good is changing constantly and rapidly, is always dynamic, while the earth's mass is subject only to slow, secular variation. It is more difficult, therefore, to get accurate measurements of value than of weight. But difficulty of accomplishment is not the same thing with inherent and essential impossibility. It is as strictly scientific to speak of measuring value as it is to speak of measuring weight. The fact that value is a psychical force, while weight is physical, does not alter the case. Any force may be measured in terms of some unit of effect arbitrarily chosen. In measuring weight, a certain quantity of some metal is taken; and the force of gravitation exerted upon it under assumed conditions is treated as the unit of weight. By comparing the force of gravitation exerted upon any other objects with this unit their respective absolute weights may be expressed in multiples of this unit, and their weights relative to each other as numerical ratios. Similarly, in measuring value, a certain quantity of tobacco of a given quality, or of gold of a given fineness, may be taken, and the value given to it under assumed conditions by men's wants treated as the unit of value. The absolute values given to any other goods by men's wants may similarly, by comparison with this unit, be measured by it and expressed in multiples of

it, while their relative values will likewise appear as simple numerical ratios. The difference between these two classes of measurements is not one of essential nature. Yet it must not be forgotten that value is a highly complex force, that values of different goods, including the unit, are affected very unequally by changes in human want, and that no objective unit of value has ever been obtained which could be applied without error.

In money, then, as the homogeneous representative of that fund of value which resides in specific goods of all kinds, all the different utilities which different goods have in their peculiar uses, all the variations of personal valuations of these goods, are levelled out and conventionalized and rendered measurable. The monetary unit is a conventional unit of measurement for value; and thus rates of transfer for different goods are commonly expressed in it. Of great importance is this fact that under the system of specialized production the value of all the specific services rendered by the various producers, whether these are direct services or are embodied in tangible goods, are expressed in a generic form in money. Men think value in terms of money. Their income is regarded as a stream of money,—so much daily, monthly, yearly; and their activity is bent to increasing this flow.

Money also represents generic value as a title of economic ownership to values in general. In the words of Carlyle, "Whoso has sixpence is sovereign to the length of a sixpence over all men; commands cooks to feed him, philosophers to teach him, kings to mount guard over him, to the length of a sixpence." The holder of money is the creditor of other men. He has rendered his service to society as producer, and has received the money as an order upon the producers of the goods he desires. The order is perfectly general in character. It is an order in blank for so much value due from society to him, payable on demand in such goods as he calls for. He does not

wish the gold. It is necessary merely as the understood unit of measurement. The bullion value of the gold is not the essence of his claim, but is merely "collateral" upon which he can realize if the producers will not honor the order in the specific forms he chooses. It is a collateral, too, upon which every holder would lose enormously if the bullion uses of coin were alone considered. The average bullion value of gold for personal use to the holders would be possiby not one-half of the present value of gold bullion.

Money, therefore, is a claim upon values which has no time or space limits. Within the economic order of society it is good everywhere and always and for every economic good. Thus income becomes, in the mind of the consumer, a generic purchasing power, which he can transform into whatever specific sources of satisfaction his wants dictate.

What I have said implies that money is a form of credit, a point which needs wider elucidation. In the proof of this point I shall also prove the main thesis of the present paper; namely, that the economic force called *credit* is the indispensable agency which inheres in the system of specialized industry.

A man, entering upon any productive operation with a view to sell his product, parts with his labor only upon the tacit assurance given by society that it will buy his product with the special products he wants. He gives credit to the consumers of his product, *i.e.*, to society as consumer, to that extent. His specific product is to him a mere credit instrument, the evidence of his claim. He produces it because he finds that, by presenting it as an order on society for the goods he wants, he can get a larger surplus over subjective cost than though he produced these latter goods himself. It has no "intrinsic" value to him, or at best only a value below cost. Left

to himself, he would never produce it. He produces it only because society as consumer has promised to redeem it at a premium on presentation. For personal uses it has to him a less than marginal utility. The value in it which enables him to get a return for his labor is its objective value, its social or market value. It is upon the basis of this market value, this customary demand of society for his product, that he extends credit to society by producing what he does not want. The personal value of the product to him is simply a "collateral" which may save him from total loss if society refuses his product.

The process is essentially the same whether he barters his product directly or sells it for money. In the latter case, he surrenders his special product, which is in effect an order upon the consumers of that product, for money, which is a generic product, and thus an order upon all the members of society. The use of money simply divides his total surplus over cost into two parts. As producer, he gains in selling his product for money; for the money embodies its objective, conventionalized value, its marginal utility to society, while to him its subjective value was below the margin. He thus gains "producer's surplus." As consumer, he gains again by exchanging the money for the specific goods he wants; for to him they have a value above this margin. Here he gains "consumer's surplus." In barter this distinction does not appear. The distinction is not altogether justifiable,* for the act of production is not finished until the desired goods are in his hands as a consumer. The use of money, however, increases the surplus over cost to every one by economizing the labor required to "market" products; *i.e.*, to get them into the hands of consumers.

The money is only another form of credit, possessing the character of wider acceptability than the special product. It is generic or universal credit. With barter and

* A point suggested to me by the late Dr. Merriam, of Cornell University.

with money alike the whole system of specialized industry is dependent upon the psychical force, credit. Society, by its customary consumption of certain amounts of certain kinds of goods, issues tacit promises to the producers of those goods to pay them in the goods they desire. Upon the "credit" of these promises all production for exchange is carried on. The holders of all products for sale and the holders of all money are creditors of society in this sense. In rude industrial societies the redemption value of these credits — *i.e.*, the quantity of desired goods which can be obtained for them — is uncertain and irregular. Only those goods will be produced for exchange which can be counted on as possessing a wide margin of possible gain above cost. So soon as society becomes well organized, "market prices" render producers tolerably certain of the redemption value of their holdings; and the risk involved in such credits steadily diminishes, until nearly all goods are produced for sale.

I have ventured to call these credits *customary* credits, to distinguish them from that class of transactions usually known as credit transactions. The latter might well be called *formal* credits. The distinction is a legal one; but I hope to show that, as an economic force, the two kinds of credit are essentially the same, and that it is merely the legal limitations of the word "credit" which have hitherto mainly guided the course of economic discussion. Customary credits are not legally enforceable. There is no legal obligation to exchange goods at fixed ratios, nor, in fact, to exchange them at all. Formal credits are expressed in definite contracts, legally enforceable. Such are promissory notes, book credits, and the like. The sovereign power in society asserts itself in customs which gradually ripen into customary law, and finally into positive statute law. These are all essentially the same: they are all "law," and in every society the

positive law remains the smallest part of total *law* of the society. Similarly, this economic force of credit, based on the faith of men in the uniformity and reasonableness of each other's voluntary acts, appears first as custom, vague and uncertain, gradually takes on a certain regularity as markets are held and money is commonly used, and finally comes in its highest development to definite forms, in which many of the elements of risk are eliminated. Similarly, again, even in the most developed stages, formal credits, like positive law, remain the smallest part of the total *credit* existing in the industrial society. There is, however, an important economic distinction between two kinds of credits of which I shall speak later.

It will make my meaning clearer to rehearse in a concrete form the main points already made, extending at the same time the range of discussion.

From the point of view of credit, industrial development may be divided into five stages. Wheat-growing may be taken as rudely typical of the development:—

I. In the first stage the wheat-grower is practically isolated from the rest of the world, thrown entirely on his own resources. Wheat does not satisfy all his wants. He must therefore, after producing a certain amount of wheat, shift his labor to the production of other things. Seeking the highest net satisfaction from his labor as a whole, he applies it in his various operations, according to the familiar law of marginal equivalence. Credit has no place in such an economy. In his single consciousness are measured both the utility of the various products and the cost of their production.

II. In the second stage our farmer has a few neighbors,— a blacksmith, a shoemaker, a tailor, a storekeeper, a school-teacher, a parson, and the editor of a country newspaper. The farmer has learned that he gets a greater surplus utility by producing more wheat than he needs for personal uses, and bartering this excess with his

various neighbors in return for their goods and services. The wheat-grower has now taken the first and most difficult step in industrial civilization. A new economic force has been called into action, which is the fundamental agency in economic progress. This force is credit. The problem before his mind is nothing less than this, in its entirety: "I must give up my habit of making personally the things I want, and must trust some one else to make them in return for my surplus wheat. If other people will not take my wheat, I shall lose the most of my labor. If they do not make the things I want, I shall also lose by having to accept things of less value to me." It is safe to say that, if this problem as a whole were present to our farmer's mind, he would never see the gain in changing his economy. An unplanned surplus of wheat some year enables him to give up shoemaking for that year, that being the operation which he finds most laborious. Gradually and hardly, with lingering yearnings for the good old times, he comes to grasp the fact that he "makes more" by growing regularly a surplus of wheat over his personal need, and depending on the sale of this surplus for his other goods. The old ideas die slowly, however.*

The radical character of this change to specialized lines of production is seen in the fact that in direct production for the satisfaction of one's own wants, intensity of want with corresponding utility of product on the one hand, and disutility of production on the other — utility and cost — are measured and balanced in the same consciousness. The wanter and the worker, in regard to each eco-

* In Eastern New York, not much over twenty years ago, my grandfather, a farmer in comfortable circumstances, with habits of mind brought down from his childhood under the Presidencies of Washington and John Adams, continued to spend a considerable part of his time in dressing flax for ropes and grain-bags to use on his farm, and even in making his own shoes — and mine, which latter fact has impressed the process upon my mind, for they were fearfully and wonderfully made.

nomic good, constitute the same person. This unity of consciousness in producer and consumer makes the certainty of his future well-being depend on two things only, — the stability of his own desires and capacities and the uniformity of nature. When he produces for exchange, however, the vast uncertainty opens before him of the instability of the desires and efforts of other men, affecting both the demand for his products and the supply of the products he wants. Credit is the force which enables men to overcome this uncertainty, and grasp that unmeasured gain which comes from specialized and organized industry.

When our farmer thus gives up the power of valuing directly his own product, the adjustment of motive between cost and utility of products is no longer made in the same mind, but is left to the vague action of many minds in the "market." In the farmer's mind the surplus wheat loses its character of an economic good, and takes on the character of a credit instrument. In an economic sense, he becomes the *creditor* of various other people, whom we call "society" for short. If his wheat is destroyed by some accident, his claim is gone. If society changes its mind and does not want so much wheat this year as last, his claim is impaired. He accepts the ordinary demand of society for wheat as a tacit promise of society to take his wheat and give him in return the goods he wants. It is only because he finds in the long run that the credit thus extended to society is safe, and that society redeems its tacit pledges, that he continues to devote more and more of his energy to wheat-growing. This illustrates what I have called customary credit.

III. In the third stage regular markets for wheat and other goods have become established, and money is in common use. Our farmer sells his surplus wheat for money, and afterwards buys the desired goods with money. There is no essential difference between this case and the last, as before seen. He simply surrenders his specific

credit instrument, surplus wheat, and receives another credit instrument, gold coin. Physically, gold coin is imperishable: wheat is not. This is an advantage. Psychically, gold coin is a claim upon all men. No one in the market will refuse it. Money is generic, not specific. This is another advantage. The bullion, as collateral, is much better than wheat. This is still another advantage. But the gold coin remains credit still.

IV. In the fourth stage credit partly takes on a new phase. Our farmer has found a net gain in each extension of his wheat-growing. Each year he has enlarged his output by investing his gains in his business. He has rented more wheat land, bought more horses and better machinery, and hired more labor. He now believes that, if he had more capital, so as to enlarge his operations yet farther, he would still gain. His neighbor, also a wheat-grower, now getting old and wishing to retire partially from active business, lends him $1,000 worth of capital in return for our farmer's note, payable in a year. There is, furthermore, at the nearest village a grain-dealer who also deals in agricultural supplies. Our farmer, from time to time, buys from him various articles needed "on credit," and brings him wheat from time to time, for which he receives credit. He has now become a formal debtor as well as a formal creditor. He has given express, definite, legally enforceable promises to other men to pay them at a future time certain amounts of wheat or money. These credits, book credits or promissory notes, I have called "formal" credits for reasons already given.

The economic significance of the credits which our farmer has received is that he is enabled to extend his profitable operations beyond the point possible if he had only his own capital. His proved ability as a producer enables him to obtain "credit" from other men having capital which they would rather lend than use themselves. So long as he can manage successfully a larger capital in

his business he will seek to borrow. He will be able to borrow so long as he proves his ability to pay more for the use of capital than its owners will gain by using it themselves. Thus the "credit" which will be given to our farmer will depend upon his industrial worth as a manager of capital, and thus the capital of society tends to get into the hands of the competent managers.

It is now readily seen that an economic distinction must be made between two classes of credits. The credit which the farmer gives to the consumer of wheat, which I have called "customary," has some economic characteristics different from the credit which the farmer gets from his neighbor, which I have called "formal." The legal distinction does not coincide, however, with the economic. The credit obtained by the consumer of wheat—*i.e.*, by society as bread-eaters—does not remain entirely customary. The baker receives formal credit for his orders upon the flour-dealer, the flour-dealer formal credit for his orders upon the miller, the miller for his orders upon the country grain-dealer, and the country grain-dealer for his orders upon the farmer. Always, however, in whatever manner industry is organized, there remains about the retail dealers the broad fringe of customary credit extended by these dealers to their customers; namely, society as ultimate consumers. This customary credit always remains as the basis of all other forms of credit and as the foundation of specialized production. As this force is transmitted from the final consumers of products into the various special channels of trade, it takes on more and more a formal character with the better organization of the "market." It remains, however, in essence, the same economic force. To it is due *external* specialization in production; that is, the separation in personality between the producer and consumer of specific goods,—in other words, the separation of industry into distinct trades for the production of each finished good. From an economic standpoint it may be called *consumer's* credit.

On the other hand, the credit which the farmer gets from his neighbor, while it is almost invariably a formal credit, has yet its economic significance in the fact that it is a transaction between two producers of the same ultimate product. All the producers of wheat in the same market, having extended their credit to the ultimate consumers of wheat, the bread-eaters, now bargain among themselves as to how much of the productive industry necessary to furnish the bread each shall undertake. The farmer's aging neighbor gives him a part of his capital, other men give him days' labor, other men agricultural machinery, other men various other things necessary; and, in return, the farmer gives them promises to pay when he shall have been paid by the bread-eaters.

Our farmer, the capitalist, the land-owner, and the wage-worker, and corresponding functionaries in every trade associated with wheat-growing in the production of bread, become differentiated. The farmer receives credit from these various functionaries. To this form of credit is due *internal* specialization in production; *i.e.*, specialization of functions within the separate trades. They usually take the form of credit extended by the other classes to the "undertaker." They may well be called "undertaker's credits." They form the larger part of what is commonly called credit. Essentially, however, they are only a secondary form of credit, within the larger circle of consumer's credit. In both the same psychological factor is involved,—reliance of person on person for definite results of future activity, the giving up of the specific direction of one's productive resources for a time, in reliance upon a promise of future reward. The formal legal character which usually attaches to the undertaker's credit is an incident of structural growth, not an essential difference; for it is also quite common in consumer's credits. They both require the presence of capital as the vehicle of their activity; *i.e.*, indirect production for the supply of

future wants. They both tend towards the same economic end,— of bringing the various productive processes under the management of the most efficient intelligence and skill, or, in other words, of putting each human worker into the place in the industrial organization where he can be most efficient. Through consumer's credit the worker can take up that trade in which he is most apt; and through undertaker's credit he comes to take that place in any trade or group of trades which his native and acquired skill fit him to hold. Credits of both kinds are alike, also, in their mechanism, their structural organization. This will appear to better advantage after bringing our farmer into the fifth stage of industrial development.

V. This is the most highly developed stage of industry, with credit organized in banks and banking systems. There is no need to describe the familiar processes of banking. In the further specialization of industry due to credit a special class of dealers in credit instruments themselves has grown up. They deal in all formal credits, whether consumer's or undertaker's. In fact, undertaker's credits are all only a form of the general force called consumer's credit, looked at from the other side. Our farmer sells wheat worth $500 to the miller, who makes it into flour and sells it to the hotel-keeper, who makes it into bread and pastry and feeds it to his guests. The farmer buys a threshing-machine from the manufacturers and pays with his check. The other transactions are paid by promissory notes which are discounted at the same bank and their amounts credited to the depositors. The notes are paid by mere transfers of credits on the banker's books, leaving a balance, perhaps, to some one's credit, which we say is paid in "money." In effect, our farmer has exchanged his wheat, to him a credit instrument, for the miller's note, another credit instrument. This he has exchanged for bank credit, and this he has surrendered for the commodity he wished. The wheat, meantime, re-

mains a credit instrument until it reaches the ultimate consumers. It has only an anticipated, a credit value. In all trade the process remains essentially the same. In an earlier time the blacksmith's customary consumption of wheat and the farmer's customary consumption of ploughs caused the farmer to give credit to the blacksmith by putting labor into wheat, while the blacksmith in his turn gave credit to the farmer by putting his labor in a plough. To each as producer the article for exchange remained a credit instrument. When exchanged, these credits cancelled each other, a balance possibly remaining due from the blacksmith which was settled by his giving a hoe "to boot." When money is in use, the value of each good is estimated in money and the balance paid in money. When the general store-keeper appears, these credit instruments are bartered through his agency, mutual credits are cancelled upon his books, balances are paid in money. Under the most highly organized system of banking the transaction does not differ in principle, as we have seen. It simply increases in complexity. Credits are mutually cancelled in the banks, the general book-keepers of industry, and balances paid in money.

Nor must it be forgotten that, while legally money is the commodity of ultimate payment, economically it is a form of credit. It is the widest form of credit, the generic credit instrument. Economically, ultimate payment only is reached when the consumer receives the desired good. Goods are unfinished until then. The process of production is incomplete until then. Anticipated values are unrealized until then. Until then goods pass through producer's hands as credit instruments, the value of which to them is objective, and resides in the minds of others,—credits which are ultimately to be paid in goods desired for consumption.

The money which circulates at any time is, therefore, only evidence that at that time in the general settlement

of accounts a balance is due. Money is thus the clearing-house certificate of general industry, showing the balances after barter transactions. Those who hold it are creditors of "society." It is credit in its widest form, because it can be directly presented to any member of society. No other transaction in credit need intervene between its possession and that of the desired good, even in the most complex organization of industry. By its marginal equivalence of utility in its commodity and money uses, money unites subjective and objective values, it enables each man to understand the valuations of other men. It conventionalizes value-thought between producers and consumers. Credits are titles to future value. Money is not only the generic finished good, and therefore the universal form of present value, but it is also the generic credit or universal title to future values. All other commodities are specific in their uses. All other credits are specific as to times of payment and personality of debtor. It is rightly regarded, therefore, as the natural form of ultimate payment in the settlement of all balances in transactions involving both customary credits and formal credits.

An interesting application of these principles, would it not unduly lengthen this paper, would be to point out the essential similarity between industrial crises and monetary panics. The former come from a derangement of customary credits, the latter from a derangement of formal credits. In one sense, therefore, the latter are economically unnecessary, the creation of law.

In case of industrial crises, producers issue too many credits; *i.e.*, produce more goods of certain kinds than are really demanded. Misplaced or excessive credit is the cause. The same is true in monetary panics; but, in the latter case, an unnecessary scarcity of money of ultimate payment is created. The whole system of representative money and credit, as organized in banking institutions, is

an elaborate realization of the idea that only standard money pays balances. What is needed at such times is some process by which goods in the hands of debtor producers, their unmatured credits, may be got into the hands of ultimate consumers; and thus that latent value be developed, that fund of consumer's subjective value be *objectivized*, and the debtor thus furnished with other means of ultimate payment.

A further word should be said about the special importance of undertaker's credits. To some extent every man is his own undertaker. In isolated production, were there such, a man would undertake to direct his work so as to get a living. He would perform every industrial function himself. He might even accumulate some capital. The scope of his undertaking, however, becomes progressively narrowed. First, it is restricted to a few products, then to one, then, perhaps, to some one operation. It is the function of the undertaker so to shape the productive processes that goods produced shall be the goods wanted. Most men find out that they are not fitted to do this in a large way. If they have no capital, they work for wages. If they have capital, they loan it to other men. The tendency is to develop a separate class of undertakers, who direct in general the productive operations. Credit is the means of making capital most available in specialized industry. It brings capital into the hands of the undertakers. The office of credit is to make the most effective combination of personal capacity and capital. As we have seen, the undertaker can get credit according to his ability to manage capital. *His credit is the present value of his future industrial worth.* If undertakers fail, they lose their credit. This is true of individual cases and of the whole social field of industry as well. Loaned capital must be repaid; *i.e.*, total capital must be maintained. An undertaker can get all the capital he can profitably make use of, which means that in a given in-

dustrial field undertakers can get loans of capital in some proportion to their ability as undertakers. Credit instruments embody the future industrial capacity of persons. The prime function of credit is thus to bring into activity the personal productive power of individuals, which is sometimes spoken of as "personal capital." Strictly speaking, reliance placed on "collateral" is not credit. The essence of credit is reliance on a person. Consumer's credits determine what relative amounts of general productive force shall be expended in the production of the various goods. Undertaker's credits determine the apportionment of capital to personal capacity in any occupation. Through its operation directive ability tends to get control of capital and labor in quantities suited to produce the best results. Costs of production are reduced, more goods and new goods are produced, and society gains in both ways. There is more reasonable consumption, more efficient production.

Credit, to attain its highest usefulness, must be capable of easy generalization. This is accomplished mainly in two ways: (1) by expressing credits in terms of money, which is generic; and (2) by such an organization of credit instruments and credit institutions that the owner of personal industrial capacity may readily exchange his individual credit, a purely specific thing, for wider credits. The banks do this, and the great banking systems which have grown up in the present century carry the process still further. Our national banking system realizes in a marked degree the idea of universalizing individual credit. A man getting his note discounted by a national bank has at his disposal a credit which is everywhere accepted, and this, too, with a remarkable economy of gold money as a reserve. From this point of view it would be a long step backward to allow note-issues by State banks. It would be retracing some steps in that remarkable evolution of the mechanism of credit which is shown

in the consolidation of banking institutions in each of the great countries that are industrially the most civilized.

To recapitulate certain points. 1. Credit, as *legally* defined, does not include all *economic* credit. The latter rests on the psychological trait of faith in the uniformity and reasonableness of other men's voluntary acts. It embraces every surrender for a time of one's productive resources to another person, in reliance upon his promise of future reward. The promise may be only *economically* enforceable.

2. The office of credit is to create specialization in industry. It separates the personality of consumer and producer of specific goods. Specialization of trades results from "consumer's credits," specialization of industrial function from "undertaker's credits."

3. The mechanism of credit embraces the whole fund of objective value residing in goods for exchange. Credit instruments are: (*a*) Goods for sale in producer's hands as credits. They are cancelled by coming into the hands of consumers. (*b*) Money, which is universally accepted as "boot" in the settlement of barter balances, because it represents generically the fund of value, and thus measures specific values and gives command over all specific values. (*c*) "Paper" credits of all kinds, including "paper money," which simply evidence ownership in value. They may be titles to specific goods or to money, the generic good.

4. Credit is organized in markets. Exchange remains essentially the same process in primitive markets and in the modern clearing-house. In both, credit instruments are cancelled by mutual transfers; and balances are paid in money, the credit universally acceptable.

Sidney Sherwood.

Johns Hopkins University.